MEMORANDUM

DATE:	September 12th, 2016
FROM:	Eric Lancaster
SUBJECT:	Weekly Progress Report @ Gold King
TO:	Kerry Guy

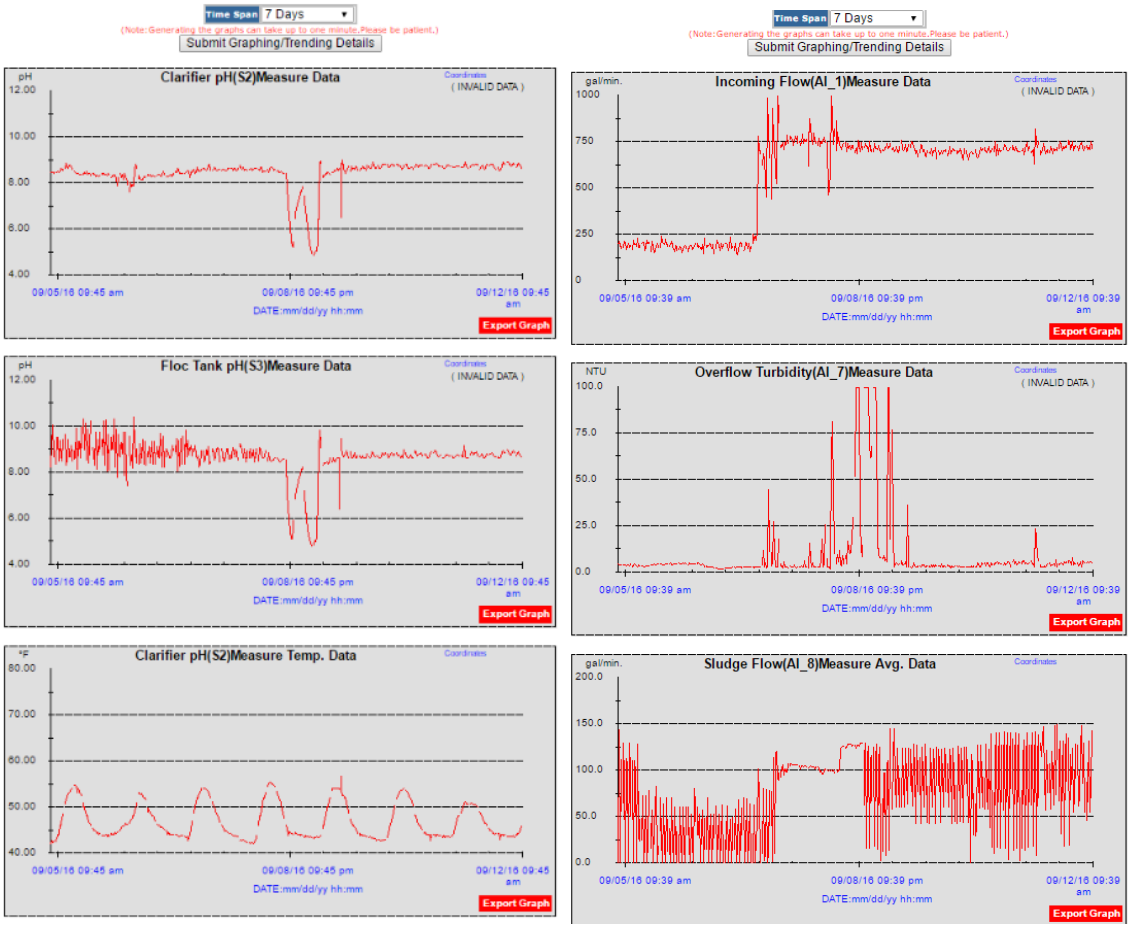
Project: Gold King Interim Water Treatment Plant (IWTP)
Location: Gladstone, Colorado
Prepared for: Emergency Response Unit – US EPA Region 8

Reporting Period: Aug 29 – Sept 12
Report No.: 35

I. General Operations Summary:

IWTS Function/Upsets

- The following graphs provide trending information during the previous 7 days. The dataloggers collect control information from the Lime Circuit (left) and Flow Circuit (right) Programmable Logic Controllers (PLCs) at the Gold King IWTP. Over the reporting period (9/5 – 9/12/2016 inclusive) Alexco treated 7.26 million gallons at an average flow rate of 720 gpm.



- Please note: Several days each week, the Alexco operators check the pH at both the floc tank and clarifier discharge. During this time, the probe is placed in vinegar (acid), and three pH buffers – 4, 7, and 10. While the probe is in the acid/buffer, the datalogger may captured one of those points for tracking purposes, which explains the occasional pH spikes seen on the graph. In addition, instantaneous spikes of the Overflow Turbidity Meter are associated with routine cleaning, which can cause the meter to spike temporarily up to 100 NTUs.
- Over the reporting period (8/29 – 9/5/2016 inclusive) Alexco treated 6.8 million gallons at an average flow rate of 675 gpm.
- A pH sample from the IWTP inlet on 8/31 measured 3.74.
- A pH sample from the IWTP inlet on 9/2 measured 3.60.
- A pH sample from the IWTP inlet on 9/9 measured 3.66.

Communication System Function Status

- No issues – reliable operations during the reporting period.

Facility or System Related Work, including Repairs & Completions

- Alexco received approval to rearrange the layout of the Reactor Tank and other site infrastructure in preparation for the building expansion scheduled in late October for completion by mid-November.

II. Identified Problems, Causes, and Solutions (Planned or Implemented)

- Recently, it has been noted that the insertion magnetic flow meters used for both incoming and outgoing flow measurements require frequent cleaning. Alexco plans to install a paddlewheel flow meter this week in the outgoing position to see if a mechanical method of measuring flow is more robust.
- Since 9/1/2016, one of the 8" HDPE lines connected to the Reactor Tank has been shut-off and disassembled (see Photo 3). A small leak was discovered in the mild steel fitting, which was caused by low pH water just upstream of the shut-off valve. The system is continuing to function properly, but the pipeline between Pond 2 and the Reactor Tank seems to cause flow spikes and surging at times. This can be seen in the turbidity graph on 9/8 and 9/9. However, at this time the flow surging does not seem to be a problem. The fitting will be replaced during the reconfiguration of the Reactor Tank.
- On 9/7 the Phase II clarifier was shut-down and cleaned. Since that time, all flow through the IWTP has been through the Primary Clarifier. In the next few weeks, Alexco plans to move the Phase II clarifier, reconnect piping and electrical, and put it back into service while the Reactor Tank is relocated and the pipeline to the Primary Clarifier is modified.
- Alexco replaced the display on the Phase II Clarifier incoming flow meter.

III. System Inspections – Specific elements inspected and finding

- N/A

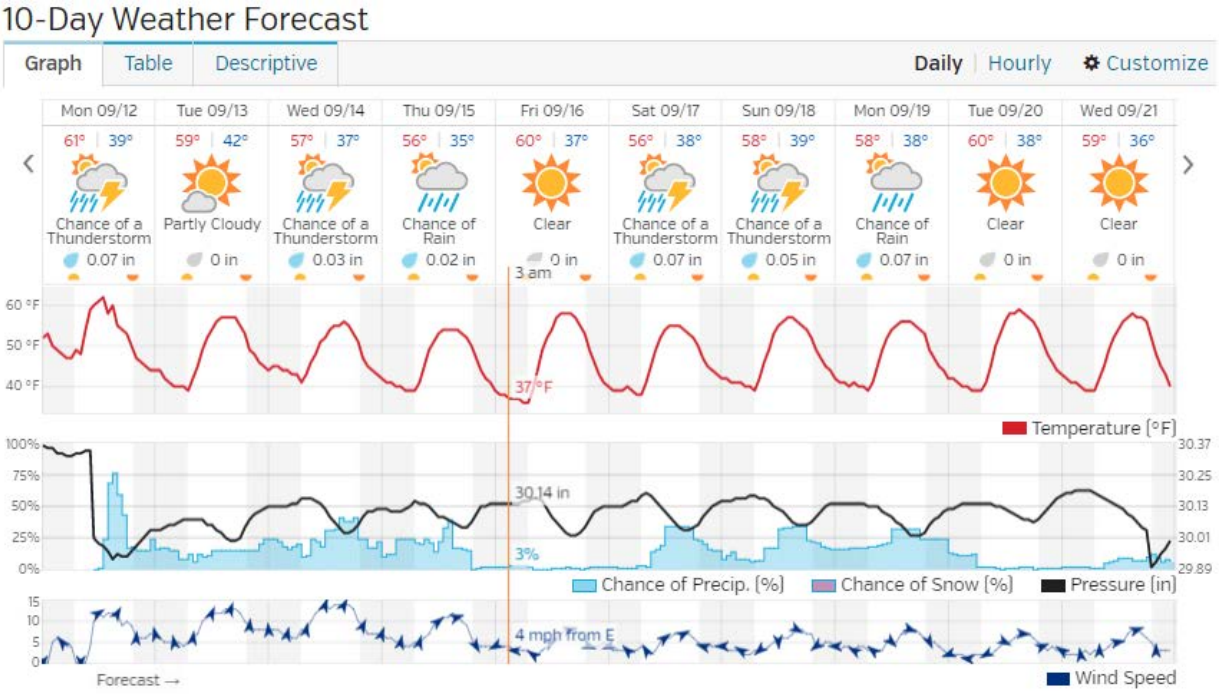
IV. Site Status

Personnel and equipment onsite

- Alexco currently employs one full-time employee (FTE) who lives in Silverton and oversees all operations at the Gold King IWTP. He is supported by remote operators in Denver, and local sub-contractors as needed.

Weather conditions

- Weather Underground Report for Silverton, CO (9/12 - 9/21/2016)



Pictures from Site

Photo 1: Discharge from the IWTP.

Photo 2: Vibratory plate compactor was used to encourage the release of extra water held within the bag with minimal success.

Photo 3: Only one 8” HDPE line is currently connected to Pond 2.